Missouri Department of Natural Resources

PUBLIC NOTICE

APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: July 28, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, ATTN: Cynthia S. Davies, Regional Director. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The department may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by August 27, 2006 or received in our office by 5:00 p.m. on August 30, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits, comments, and other information including copies of applicable regulations are available for inspection and copying at the department's website, http://www.dnr.mo.gov/env/wpp/wpcp-pn.htm or at the Department of Natural Resources, Southwest Regional Office, Water Pollution Unit, 2040 W. Woodland, Springfield, Missouri 65807, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: July 28, 2006 Permit Number: MO-0133060 Southwest Regional Office	
FACILITY NAME AND ADDRESS	**NAME AND ADDRESS OF OWNER**
Goodnight Development WWTF Highway 215 Pleasant Hope, MO 65725	Burdette Family Limited Partnership 5455 S. Old Mill Road Pleasant Hope, MO 65725
RECEIVING STREAM & LEGAL DESCRIPTION	**TYPE OF DISCHARGE**
Pomme de Terre River NE¼, SW¼, Sec. 34, T32N, R21W Polk County	Domestic, new

Plans and specifications for this facility have been reviewed by the Department of Natural Resources. The design engineer, a registered Missouri professional engineer, has certified that the plans and specifications meet all requirements of 10 CSR 20-Chapter 8 Waste Treatment Design.

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0133060
Owner:	Burdette Family Limited Partnership
Address:	5435 S. Old Mill Road, Pleasant Hope, MO 65725
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Goodnight Development WWTF
Facility Address:	Highway 215, Pleasant Hope, MO 65725
Legal Description:	NE¼, SW¼, Sec. 34, T32N, R21W, Polk County
Receiving Stream:	Pomme De Terre River (P)
First Classified Stream and ID:	Pomme De Terre River (P) (01440)
USGS Basin & Sub-watershed No.:	(10290107-010003)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Subdivision / Sewerage Works - SIC #4952 / 4952

Septic tanks / recirculating sand filter / chlorination / dechlorination / sludge disposal by contract hauler.

Design organic population equivalent is 1,764.
Design average daily flow is 91,778 gallons per day.
Design sludge production is 26.5 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date

Cynthia S. Davies, Regional Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	GPD	*		*	once/month**	24 hr. total
Biochemical Oxygen Demand$_5$	mg/L	60		30	once/month**	***
Total Suspended Solids	mg/L	60		30	once/month**	***
pH – Units	SU	***		***	once/month**	grab
Fecal Coliform (Note 1)	#/100 ml	1000		400 (Note 2)	once/month**	grab
Total Residual Chlorine as Cl_2	mg/L	0.02 (**Note 3**) (0.13 ML)		0.01 (**Note 3**) (0.13ML)	once/month**	grab
Ammonia as N	mg/L				once/month**	grab
March – May		12.7		6.3		
June – August		8.5		4.2		
September – November		12.7		6.3		
December – February		12.7		6.3		
Temperature	°C	*		*	once/month**	grab
Dissolved Oxygen (**Note 4)**	mg/L	5.0		6.3	once/month**	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** Reports shall be submitted by the 28th day of the month following the reporting period, e.g. Reporting period is the month of March (samples collected monthly), report due by April 28th.

*** A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample. A person may physically collect the four grab samples or a composite sampler may be set up to collect the four grab samples.

**** pH is measured in pH units and is not to be averaged. The pH for all facilities except lagoons is limited to the range of 6.0-9.0 pH units.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - Monthly average limit for Fecal Coliform is expressed as a geometric mean. Geometric mean for n samples = $[a_1 \times a_2 \times a_3 \ldots . \times a_n]^{1/n}$

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 3 - This permit contains a Total Residual Chlorine (TRC) limit.

(a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

(b) Disinfection is required year-round unless the permit specifically states that "Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.

(c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**

(d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 mg/L" TRC.

Note 4 - The Dissolved Oxygen limits are the minimums. The facility shall not go below the set limits.

C. SPECIAL CONDITIONS

1. The facility shall upgrade prior to construction of the 80th dwelling to start phase II of the development. A new construction shall be obtained if construction permit has expired by submitting plans and specifications to the appropriate regional office.

2. The facility shall upgrade prior to construction of the 160th dwelling to start phase III of the development. A new construction shall be obtained if construction permit has expired by submitting plans and specifications to the appropriate regional office.

3. The facility shall upgrade prior to construction of the 240th dwelling to start phase IV of the development. A new construction shall be obtained if construction permit has expired by submitting plans and specifications to the appropriate regional office.

4. This permit may be reopened and modified, or alternatively revoked and reissued, to:

   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

      (2) controls any pollutant not limited in the permit.

   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.

   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

5. All outfalls must be clearly marked in the field.

6. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

C. SPECIAL CONDITIONS (continued)

7. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 µg/L);

(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;

(4) The level established in Part A of the permit by the Director.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

8. Report as no-discharge when a discharge does not occur during the report period.

9. Water Quality Standards

(a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.

(b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

(1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

(2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;

(3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;

(5) There shall be no significant human health hazard from incidental contact with the water;

(6) There shall be no acute toxicity to livestock or wildlife watering;

(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;

(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

10. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

(a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.

(b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis

Missouri Department of Natural Resources
Southwest Regional Office
NPDES PERMITS AND ENGINEERING SECTION

Water Quality Review Sheet

Determination of Effluent Limits

Facility Information

FACILITY NAME: Goodnight Development WWTF NPDES #: MO-0133060

FACILITY TYPE/DESCRIPTION: New facility. Septic tanks / recirculating sand filter / chlorination / dechlorination / sludge disposal by contract hauler.

ECOREGION: Ozark / Osage 8- DIGIT HUC: 10290107 COUNTY: Polk

Central Irregular Plains Interior River Valleys and Hills Ozark Highlands
Mississippi Alluvial & Loess Plains Western Corn Belt Plains

LEGAL DESCRIPTION: NE¼, SW¼, Sec. 34, T32N, R21W LATITUDE/LONGITUDE: UTMS: X: 479726.5 Y: 4145177.7

WATER QUALITY HISTORY: None. New facility

Outfall Characteristics

OUTFALL	DESIGN FLOW (CFS)	TREATMENT TYPE	RECEIVING WATERBODY	WBID
001	0.142	Secondary	Pomme De Terre River	01440

Receiving Waterbody Information

WATERBODY	CLASS	7Q10 (CFS)	1Q10 (CFS)	30Q10 (CFS)	*DESIGNATED USES
Pomme De Terre River	P	0.5	0.29	1.22	LWW, AQL, WBC, SCR

*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warmwater Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

COMMENTS: New facility that will be built in phases.

MIXING CONSIDERATIONS

Mixing Zone (MZ): One-quarter (1/4) stream width, cross-sectional area, or volume of flow; length one-quarter (1/4) mile. (10 CSR 20-7.031(4)(A)4.B.(II).

Zone of Initial Dilution (ZID): One-tenth (0.1) of the mixing zone width, cross-sectional area, or volume of flow.

	Flow (cfs)	MZ (cfs)	ZID (cfs)
7Q10	0.5	0.125	0.0125
1Q10	0.29	0.0725	0.00725
30Q10	1.22	0.305	N/A

Applicable mixing zone regulation:

Permit Limits and Information

TMDL WATERSHED: (Y OR N) [N] W.L.A. STUDY CONDUCTED: (Y OR N) [N] DISINFECTION REQUIRED: (Y OR N) [Y] USE ATTAINABILITY ANALYSIS: (Y OR N) [N]

OUTFALL #001

WET TEST (Y OR N): [N] FREQUENCY: N/A AEC: N/A METHOD: N/A

$$\text{A.E.C. \%} = \left(\frac{\text{Design Flow + Zone of Initial Dilution}}{\text{Design Flow}} \right)^{-1} \text{X100}$$

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY
FLOW	MONITOR		MONITOR	Monthly
BOD_5 (MG/L)	60		30	Monthly
TSS (MG/L)	60		30	Monthly
PH (S.U.)	6-9		6-9	Monthly
AMMONIA AS N (MG/L) (MARCH – MAY)	12.7		6.3	Monthly
AMMONIA AS N (MG/L) (JUNE - AUGUST)	8.5		4.2	Monthly
AMMONIA AS N (MG/L) (SEPTEMBER - NOVEMBER)	12.7		6.3	Monthly
AMMONIA AS N (MG/L) (DECEMBER - FEBRUARY)	12.7		6.3	Monthly
FECAL COLIFORM (COLONIES/100 ML)	1000		400	Monthly
DISSOLVED OXYGEN (MG/L) MINIMUMS	5.0		6.3	Monthly
TOTAL RESIDUAL CHLORINE (MG/L)	0.02		0.01	Monthly

Please report the date, time, and location for each parameter sampled along with the average daily flow (actual flow measured or estimated, not design flow). All the parameters should be sampled on the same day and within no more than a 2-hour period. Dissolved oxygen (DO) measurements are to be taken during the period from one hour prior to sunrise to one and one-half hour after sunrise. If discharge is contingent to storm events, rainfall should be measured every time there is a discharge.

Derivation and Discussion of Limits

Wasteload allocations (WLA) were calculated using water quality criteria and the dilution equation below:

$$C = \frac{(C_s * Q_s) + (C_e * Q_e)}{(Q_e + Q_s)}$$ (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow (cfs)
C_e = effluent concentration
Q_e = effluent flow (cfs)

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable acute water quality criteria (CMC: criteria maximum concentration) and stream volume of flow.

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Biochemical Oxygen Demand (BOD_5) 30 mg/L monthly average (10 CSR 20-7.015(8)(B)1). Daily limits calculated by (30 x 3.114) / 1.5524 = 60 mg/L daily maximum.

Total Suspended Solids (TSS) 30 mg/L monthly average (10 CSR 20-7.015(8)(B)1). Daily limits calculated by (30 x 3.114) / 1.5524 = 60 mg/L daily maximum.

PH: shall be maintained in the range from six to nine (6-9) standard units (10 CSR 20-7.015(8)(B)2).

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.042 mg/L.

Season	Temp (^oC)	pH (SU)	Total Ammonia Nitrogen CCC (mg N/L)	Total Ammonia Nitrogen CMC (mg N/L)
Mar 1 – May 31	16	7.8	2.8	12.1
Jun 1 – Aug 31	28	7.8	1.3	12.1
Sept 1 – Nov 30	16	7.8	2.8	12.1
Dec 1 – Feb 29	6	7.8	3.1	12.1

Spring: Mar 1 – May 31, Summer: Jun 1 – Aug 31, Fall: Sep 1 – Nov 30,Winter: Dec 1 – Feb 29

Spring
Acute: C_e = ((0.142+0.00725)*12.1-0.00725*0.042) / 0.142 = 8.5106
WLA_a = 12.72
LTA_a = 12.72 mg/L (0.321) = **4.08 mg/L** [CV = 0.6, 99th Percentile]

Chronic: C_e = ((0.142+0.305)*2.8-0.305*0.042) / 0.142 = 8.72
WLA_c = 8.72
LTA_c = 8.72 mg/L (0.780) = 6.80 mg/L [CV = 0.6, 99th Percentile, n = 30]

MDL = 4.08 mg/L * 3.11 = 12.7 mg N/L [CV = 0.6, 99th Percentile]
AML = 4.08 mg/L * 1.55 = 6.3 mg/L [CV = 0.6, 95th Percentile, n = 4]

Summer
Acute: C_e = ((0.142+0.00725)*12.1-0.00725*0.042) / 0.142 = 8.5106
WLA_a = 12.72
LTA_a = 12.72 mg/L (0.321) = 4.08 mg/L [CV = 0.6, 99th Percentile]

Chronic: C_e = ((0.142+0.305)*1.3-0.305*0.042) / 0.142 = 4.00
WLA_c = 4.00
LTA_c = 4.00 mg/L (0.780) = **3.12 mg/L** [CV = 0.6, 99th Percentile, n = 30]

MDL = 3.12 mg/L * 3.11 = 9.7 mg N/L [CV = 0.6, 99th Percentile]
AML = 3.12 mg/L * 1.55 = 4.8 mg/L [CV = 0.6, 95th Percentile, n = 4]

Fall
Acute: C_e = ((0.142+0.00725)*12.1-0.00725*0.042) / 0.142 = 8.5106
WLA_a = 12.72
LTA_a = 12.72 mg/L (0.321) = **4.08 mg/L** [CV = 0.6, 99th Percentile]

Chronic: C_e = ((0.142+0.305)*2.8-0.305*0.042) / 0.142 = 8.72
WLA_c = 8.72
LTA_c = 8.72 mg/L (0.780) = 6.80 mg/L [CV = 0.6, 99th Percentile, n = 30]

MDL = 4.08 mg/L * 3.11 = 12.7 mg N/L [CV = 0.6, 99th Percentile]
AML = 4.08 mg/L * 1.55 = 6.3 mg/L [CV = 0.6, 95th Percentile, n = 4]

Winter
Acute: C_e = ((0.142+0.00725)*12.1-0.00725*0.042) / 0.142 = 8.5106
WLA_a = 12.72
LTA_a = 12.72 mg/L (0.321) = **4.08 mg/L** [CV = 0.6, 99th Percentile]

Chronic: C_e = ((0.142+0.305)*3.1-0.305*0.042) / 0.142 = 9.67
WLA_c = 9.67
LTA_c = 9.67 mg/L (0.780) = 7.54 mg/L [CV = 0.6, 99th Percentile, n = 30]

MDL = 4.08 mg/L * 3.11 = 12.7 mg N/L [CV = 0.6, 99th Percentile]
AML = 4.08 mg/L * 1.55 = 6.3 mg/L [CV = 0.6, 95th Percentile, n = 4]

Season	Maximum Daily Limit (mg N/L)	Average Monthly Limit (mg N/L)
Mar 1 – May 31	12.7	6.3
Jun 1 – Aug 31	8.5	4.2
Sept 1 – Nov 30	12.7	6.3
Dec 1 – Feb 29	12.7	6.3

Fecal Coliform: Lake limits apply – 400 #/100mL monthly average and 1,000 #/100 mL (10 CSR 20-7.015(3)(B)(3).

Dissolved Oxygen: Oxygen Saturation 660' msl, 0.230 g/L chloride, 28°C = 7.6293
Minimum Daily Limit = 5.0 mg/L from CSR 20-7 Table A
C* - C MDL = 7.6293-5.0 = 2.6293
C*-C LTAc = 2.6293/3.114 = 0.8443
C*-C AML = (0.8443)(1.5524) = 1.3107
AML C = 7.6293-1.3107 = 6.3186 or 6.3

Total Residual Chlorine: Background total residual chlorine = 0.0 mg/L.

Acute: C_e = ((0.142+0.0125)*0.019-0.0125*0) / 0.142 = 0.0207
WLA_a = 0.0207
LTA_a = 0.0207 mg/L (0.321) = **0.00664 mg/L** [CV = 0.6, 99th Percentile]

Chronic: C_e = ((0.142+0.125)*0.01-0.125*0) / 0.142 = 0.00188
WLA_c = 0.00188
LTA_c = 0.00188 mg/L (0.5274) = 0.00882 mg/L [CV = 0.6, 99th Percentile, n = 30]

MDL = 0.00664 mg/L * 3.11 = 0.02 mg /L [CV = 0.6, 99th Percentile]
AML = 0.00664 mg/L * 1.55 = 0.01 mg/L [CV = 0.6, 95th Percentile, n = 4]

Reviewer: Megan Hart
Date: July 20, 2006
Unit Chief: Gale Roberts, P.E.

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data are available that may affect the recommended monitoring and effluent limits, please forward these data to the author.